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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,548

10/24/2003

Yasuhide Hamada

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08/31/2006

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EXAMINER

GLEITZ, RYAN M

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/691,548		HAMADA ET AL.	
	Examiner		Art Unit	
	Ryan Gleitz		2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006 and 10 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 10-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Echigo et al. (JP 08-160791).

Echigo et al. disclose a fixing roller (10), heating means (11) for allowing the outer peripheral surface of the fixing roller (10) to have a given temperature capable of performing a fixing operation; a pressing roller (20) in rotational contact with the fixing roller (10).

Pressure lever (23) and spring (26) form a biasing member for allowing the pressing roller (20) to be brought into press contact with the fixing roller (10) at a given pressure. The fixing roller (10) is disposed on the side of the sheet surface supporting the unfixed toner; the pressing roller (20) is disposed on the opposite side of the fixing roller with respect to the sheet.

Because of the angle of the guide grooves (30), the biasing member is applying a biasing force to the pressing roller in a direction intersecting with a plane connecting the respective center axes of the fixing roller and the pressing roller. It should be noted that all directions are “a direction intersecting with a plane connecting the respective center axes of said fixing roller and said pressing roller.” Any line intersects every plane, except when the line is both parallel to the plane and not coplanar with the plane.

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Regarding claim 2, the angle of the guide grooves is measured from figure 1 at about 25 degrees on the side of sheet feeding, which reads on an angle between 5 and 80 degrees on a sheet-feeding side.

Regarding claims 4 and 8, the fixing roller (10) is formed with TEFLON and the pressure roller (20) is formed from foaming silicon (paragraph [0007]), which reads on the fixing roller has a hard surface portion, and the pressing roller has an elastic surface portion.

Regarding claims 5 and 7, figure 1 illustrates a releasing means (no reference numeral) for releasing the sheet attached on the outer peripheral surface of the fixing roller (10) after passing through the rotational contact region, from the outer peripheral surface of the fixing roller (10), wherein the releasing means is disposed opposed to the outer peripheral surface of the fixing roller (10) in a non-contact manner.

Regarding claim 9, the heating means includes a heater (11) embedded in the fixing roller (10), and the heater (11) is operable to heat the outer peripheral surface of the fixing roller from the inside of the fixing roller (10).

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Moriya (JP 08-146800).

Moriya discloses a fixing roller (1), heating means (H), a pressing roller (2), and spring (6a) and arm (5) as a biasing member for allowing the pressing roller (2) to be brought into press contact with said fixing roller (1) at a given pressure, wherein the fixing apparatus is operable to allow a sheet with a surface supporting an unfixed toner thereon to pass through the rotational contact region along one direction so as to fix the unfixed toner onto the sheet, the fixing

apparatus being characterized in that: the fixing roller is disposed on the side of the sheet surface supporting the unfixed toner.

The pressing roller (2) is disposed on the opposite side of the fixing roller (1) with respect to the sheet; and the biasing member (6a) the biasing member is applying a biasing force to the pressing roller in a direction intersecting with a plane connecting the respective center axes of the fixing roller and the pressing roller. It should be noted that all directions are "a direction intersecting with a place connecting the respective center axes of said fixing roller and said pressing roller." Any line intersects every plane, except when the line is both parallel to the plane and not coplanar with the plane.

Regarding claim 3, figure 1 shows that the angle X being an axis connecting the respective centers of the fixing and pressing rollers, the Y being an axis along a direction in which the pressing roller is biased toward the fixing roller in the rotational contact region is between 5 and 80. Figure 2 shows that the angle is in the direction of a sheet-discharging side with respect to the axis X.

Claims 1-4 and 8 are rejected under 35 U.S.C. 102(a) as being anticipated by Hamada et al. (JP 2003-057981).

Hamada et al. disclose a fixing apparatus including a fixing roller (24); heating means (30), a pressing roller (26) in rotational contact with the fixing roller (24). In Figure 8, a biasing member (34) allows the pressing roller (26) to be brought into press contact with the fixing roller (24) at a given pressure, wherein the fixing apparatus is operable to allow a sheet with a surface supporting an unfixed toner thereon to pass through the rotational contact region along one

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direction so as to fix the unfixed toner onto the sheet, the fixing apparatus being characterized in that: the fixing roller is disposed on the side of the sheet surface supporting the unfixed toner; the pressing roller is disposed on the opposite side of the fixing roller with respect to the sheet.

The biasing member (24) the biasing member is applying a biasing force to the pressing roller in a direction intersecting with a plane connecting the respective center axes of the fixing roller and the pressing roller. It should be noted that all directions are "a direction intersecting with a plane connecting the respective center axes of said fixing roller and said pressing roller." Any line intersects every plane, except when the line is both parallel to the plane and not coplanar with the plane. See Figure 8.

Regarding claims 2 and 3, Table 1 shows examples of an angle defined between X and Y, the X being an axis connecting the respective centers of the fixing and pressing rollers, the Y being an axis along a direction in which the pressing roller is biased toward the fixing roller in the rotational contact region with values of +45 degrees and -45 degrees.

Regarding claim 4, the fixing roller (24) and/or the pressure roller (26) may have an elastic portion made of silicon rubber, and the other roller has a hard surface portion. See paragraphs [0025], [0031], [0034], and [0041].

Regarding claim 8, the pressure roller includes a core (26A), and the fixing roller includes a core (24A).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Echigo et al. (JP 08-160791) in view of Matsushige (JP 57-005073).

Echigo et al. disclose the fixing apparatus above but do not disclose a releasing means in contact with the outer peripheral surface of the fixing roller.

However, Matsushige does disclose a pawl (25a) as a releasing means in contact with the outer peripheral surface of the fixing roller to peel a sheet from the fixing roller.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fixing apparatus of Echigo et al. with the pawl taught by Matsushige to peel a sheet from a fixing roller, and in doing so, protect the heating roller from damage by bringing the pawl in and out of contact with the roller. Abstract, lines 1-3.


Contact Information

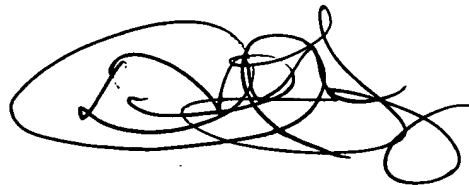
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Gleitz whose telephone number is (571) 272-2134. The examiner can normally be reached on Monday-Friday between 9:00AM and 6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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SUPERVISORY PATENT EXAMINER